

**ANNUAL REPORT ON THE  
IMPLEMENTATION OF ENERGY EFFICIENT MANUFACTURED HOMES  
INCENTIVE PROGRAM**

**SECTION 48-52-870, CODE OF LAWS OF SOUTH CAROLINA**

**DECEMBER 2014**



**This document may be downloaded from the South Carolina Energy Office  
website**

**<http://www.energy.sc.gov/residential>**

This material is based upon work supported by the U.S. Department of Energy under Award Number(s) DE-EE0003884.

Disclaimer: This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

**Prepared by the South Carolina Energy Office  
Submitted to the South Carolina General Assembly  
December 2014**

*The South Carolina Energy Office submits this report in accordance with  
Section 48-52-870, Code of Laws of South Carolina.*

Approximately 20 percent of South Carolinians live in manufactured housing, one of the highest percentages in the nation. Legislation enacted in 2008 was designed to create incentives for ENERGY STAR labeled homes which, like other ENERGY STAR products, are more energy efficient than those which simply meet required standards. These incentives include the elimination of all sales tax on ENERGY STAR manufactured homes and a \$750 nonrefundable state income tax credit for eligible home buyers. The South Carolina Energy Office administers the tax credit approval process and tracks savings.

### **Summary of 2014 Savings**

In the five and a half years the program has been in effect, it has encouraged savings that average approximately \$444.00 per homeowner per year, or an average of approximately \$24,400.00 over the lifetime of the home at current energy prices, based on the tax credit applications received by the South Carolina Energy Office. As of December 1, 2014 59 requests for tax credit approvals had been received during 2014. Twenty-four of these were for homes purchased during 2013, for which tax credit documentation was not requested until 2014. The remaining 35 requests were for homes purchased in 2014. Based on past experience we expect that number to double, since many home buyers wait until they are ready to file taxes to request the approval form. However, based only on applications received to date for homes purchased in 2014, overall savings for those 35 homebuyers will be approximately \$967,000 over the expected life of their homes. This equates to a savings of 26,462 mmBtu in energy for all 35 homes over their expected useful life.

In addition, the ENERGY STAR homes for which tax credits have been requested to date in 2014 will collectively save more than 10.06 million pounds of CO<sub>2</sub> over their estimated 55-year lifetime. See Table 1 on the following page.

**Table 1: ENERGY STAR Manufactured Homes Tax Credit Summary  
Inception to Date**

|   | <b>July-<br/>Dec<br/>2009</b> | <b>Jan-Dec<br/>2010</b> | <b>Jan-Dec<br/>2011</b> | <b>Jan-Dec<br/>2012</b> | <b>Jan-Dec<br/>2013<sup>1</sup></b> | <b>Jan-Dec<br/>2014<sup>2</sup></b> | <b>Total to<br/>Date</b> |
|---|-------------------------------|-------------------------|-------------------------|-------------------------|-------------------------------------|-------------------------------------|--------------------------|
| <b>Estimated total ENERGY STAR labeled homes sold to SC residents<sup>3</sup></b> | 82                            | 230                     | 229                     | 179                     | 275                                 | 422                                 | 1417                     |
| <b>Tax credit applications</b>  | 9                             | 43                      | 59                      | 84                      | 48                                  | 35                                  | 278                      |
| <b>Estimated energy savings per year (mmBtu)</b>                                  | 131                           | 602                     | 786                     | 1160                    | 642                                 | 481                                 | 3802                     |
| <b>Expected cost savings per year (\$)</b>  | \$4,062                       | \$18,620                | \$24,315                | \$35,896                | \$22,413                            | \$17,584                            | \$122,890                |
| <b>Estimated energy savings over life of homes (mmBtu)</b>                        | 7,218                         | 33,089                  | 43,209                  | 63,790                  | 35,315                              | 26,462                              | 209,083                  |
| <b>Expected cost savings over life of homes (\$)</b>                              | \$223,400                     | \$1,024,102             | \$1,337,312             | \$1,974,260             | \$1,232,711                         | \$967,125                           | \$6,758,910              |
| <b>Estimated CO2 savings per year (lbs)</b>                                       | 49,871                        | 228,618                 | 298,538                 | 440,727                 | 243,994                             | 182,829                             | 1,444,577                |
| <b>Estimated CO2 savings over life of home (lbs)</b>                              | 2,742,916                     | 12,573,962              | 16,419,563              | 24,240,029              | 13,419,681                          | 10,055,617                          | 79,451,768               |

<sup>1</sup> Corrected for applications received & processed after 12/10/13

<sup>2</sup> Processed by 12/1/14

<sup>3</sup> Data provided by Systems Building Research Alliance

Retailers continue to improve their processes to ensure that customers submit completed tax credit requests in a timely manner. Only 20 homeowners filed for a tax credit approval before the 2010 report was prepared, and an additional 23 applied for the credit after the end of the calendar year but before filing their income taxes. In 2011, only 28 homeowners filed for tax credit approval as of the compilation of 2011 data. An additional 29 applied for the credit between January and the April tax filing deadline. By 2012, 60% of those seeking tax credits requested them before the end of the calendar year. Unfortunately, the trend appears to be reversing, since only 24 applications were received prior to December 1, 2013, with an equal number submitting their applications after January 1, 2014. To date, we have received 35 applications for tax credit approval for homes purchased in 2014 and expect to receive a large number of approval requests as tax season begins.

The SCEO continues to work with the Manufactured Housing Institute of South Carolina to raise awareness of the program and to encourage dealers to give the tax credit application and the site installation checklist to the buyer, thus increasing the likelihood the buyer will apply for the tax credit. This appears to be working, since most applications are complete and some dealers are helping homeowners to fill in the forms.

As shown in Table 1, there is a large gap between the number of ENERGY STAR homes sold and the number of tax credit applications received. We believe there are two primary reasons for this gap. Many manufactured home purchasers may not have enough tax liability to take advantage of the non-refundable tax credit. Representatives of the industry pointed out at the time legislation was passed that rebates or refundable tax credits could be utilized by any homebuyer, regardless of tax liability, but a non-refundable tax credit could disadvantage those on fixed or low incomes. We have had a number of conversations with people who have purchased ENERGY STAR manufactured homes, but are on fixed incomes and do not file tax returns.

A second factor which seems to make a difference is the understanding that taxpayers, retailers, and tax preparers have about tax liability. Some individuals seem to believe that if they are not expecting a refund, they cannot take advantage of the tax credit. When given the opportunity, we explain the difference between taxes owed and taxes already paid through payroll deductions, but retailers may have the best chance of helping a home buyer understand whether a tax credit could be useful or not.

Another factor which could affect use of the tax credit is the lack of incentives for dealers to feature the energy efficient homes. Such incentives have been provided by some utilities in South Carolina and neighboring states, but there are no incentives for dealers in place at this time.

## **BACKGROUND**

### **South Carolina Energy Office**

The 1992 South Carolina Energy Efficiency Act established the South Carolina Energy Office (SCEO) within the South Carolina Budget and Control Board in order to address energy issues in a consistent and professional manner. The SCEO carries out the state policy and program mandates of the Act and also administers the State Energy Program funded by the US Department of Energy (DOE). Additionally, the office is responsible for substantial functions related to radioactive waste disposal mandated by legislation passed by the General Assembly in 2000. The mission of the SCEO is to increase energy efficiency and diversity, enhance environmental quality, and save energy dollars for South Carolina. As part of this mission, the SCEO administers the Energy Efficient Manufactured Homes Incentive Program.

### **Established Incentives**

Approximately 20 percent of South Carolinians live in manufactured housing, one of the highest percentages in the nation. Older manufactured homes, built before 1980, consume an average of 53 percent more energy per square foot compared to all other types of homes. Fifty-five percent of these households have incomes below 150 percent of the federal poverty level (Environmental and Energy Study Institute fact sheet, June 2009). These low-to-moderate-income residents cannot afford higher than average energy bills. Indeed, anecdotal evidence from utilities and other organizations suggests that some residents have lost their homes not because they cannot afford to pay the mortgage, but because they cannot afford to pay the utility bill. Therefore, any measures that reduce energy use, and thus energy bills, for residents of manufactured housing will contribute significantly to the overall economic well-being of the 20 percent of South Carolina residents who live in manufactured homes.

In 1992, legislation established South Carolina-specific criteria for energy efficient manufactured homes. Manufacturers constructing homes which meet the criteria order labels from the state and affix them to the more energy efficient homes. Individuals who purchase these energy efficient homes pay no more than \$300 in sales tax on the home itself. Buyers of homes which do not meet the energy efficient criteria pay an additional 2% in sales tax. The program was initially managed by the SC Department of Labor, Licensing and Regulation. When the SCEO took over the program in 1998, approximately 16 percent of all manufactured homes sold met the more stringent energy efficiency criteria.

After 11 years of program implementation, between 70 percent and 80 percent of homes met the South Carolina energy efficiency criteria (Manufactured Housing Institute of SC, 2008). We estimate that these energy efficiency standards could have saved South Carolinians as much as \$130 million over the expected life of homes purchased, based on an estimated annual savings of \$152 for a standard manufactured home and \$252 in annual savings for a doublewide home. However, as industry standards have improved,

the amount of savings that can reasonably be attributed to the labeling program have decreased.

Since 1998 more than 68,000 labels have been distributed to manufacturers, peaking in 2003 with 13,076 labels distributed and falling to a low of 840 for 2012. We expect the drop off in labeled homes is due to the overall decline in the residential market, as well as the move to ENERGY STAR labeled homes by some manufacturers. We view the original energy efficiency program as a great success because it spurred change during a period when little attention was paid to energy efficiency in manufactured housing. Table 2 on the following page summarizes the number of energy efficient labels requested by manufacturers each year since SCEO began managing the program directly.

**Table 2: Energy Efficient Labels Requested by Manufacturers 1998-2014**

| <b>Years</b> | <b>Labels Requested</b> |
|--------------|-------------------------|
| <b>1998</b>  | 10,349                  |
| <b>1999</b>  | 11,722                  |
| <b>2000</b>  | 5,860                   |
| <b>2001</b>  | 5,595                   |
| <b>2002</b>  | 4,180                   |
| <b>2003</b>  | 13,076                  |
| <b>2004</b>  | 2,360                   |
| <b>2005</b>  | 2,331                   |
| <b>2006</b>  | 2,000                   |
| <b>2007</b>  | 1,795                   |
| <b>2008</b>  | 1,610                   |
| <b>2009</b>  | 1,200                   |
| <b>2010</b>  | 1,935                   |
| <b>2011</b>  | 941                     |
| <b>2012</b>  | 840                     |
| <b>2013</b>  | 1,386                   |
| <b>2014</b>  | 1,465                   |
| <b>Total</b> | <b>68,645</b>           |

New legislation enacted in 2008 was designed to create more significant incentives for ENERGY STAR labeled homes, which are even more energy efficient than the state-specific energy efficient criteria from 1992. These incentives include the elimination of all sales tax on ENERGY STAR manufactured homes and a \$750 nonrefundable state income tax credit for eligible home buyers. These credits are offered in addition to, not in place of, the older energy efficiency sales tax incentive

## **CURRENT PROGRAM**

Manufactured housing has been regulated by the US Department of Housing and Urban Development (HUD) since 1976 under Federal Manufactured Housing and Construction Standards (24 CFR 3280). In 2001, the US DOE and the US Environmental Protection Agency (EPA) created standards for ENERGY STAR manufactured homes, which are at least 15 percent more energy efficient than homes meeting the minimum energy code. In general, ENERGY STAR qualified homes include features and appliances which make them as much as 30 percent more efficient than most recently constructed manufactured or site-built homes. Factors contributing to increased efficiency include:

- Effective insulation in walls and floors
- High performance windows, including protective coatings and improved frame assemblies
- Tight construction and ducts so that cracks and holes are sealed to reduce drafts, dust and moisture problems
- High efficiency heating and cooling equipment
- ENERGY STAR qualified lighting and appliances

Section 48-52-870 of the SC Code of Laws creates the Energy Efficient Manufactured Homes Incentive Program. The law was enacted in 2008 to provide financial incentives for the purchase and installation of energy efficient ENERGY STAR manufactured homes in South Carolina, saving money for low income residents and reducing energy use across the state.

When it was initially created, this program complemented federal incentives, which offered \$1000 tax credits to manufacturers of ENERGY STAR rated homes, and incentives offered by one utility (Progress Energy) to retailers who sell ENERGY STAR homes. At present, the state tax credit and sales tax exemption are the only statewide incentives offered to encourage the purchase of ENERGY STAR manufactured homes. However, incentives for an ENERGY STAR residence may be available through individual utilities.

### **Implementation**

As required by law, the SCEO created retailer instructions (Appendix A) and an application form (Appendix B) for the \$750 tax credit. The SCEO worked with the South Carolina Department of Revenue and the Manufactured Housing Institute of South Carolina to develop instructions for retailers and a form, to certify the purchase, which would be simple for home buyers to complete.

Retailers who sell an ENERGY STAR manufactured home are required to certify that they have installed the home in accordance with guidelines. That certification is returned to the home's manufacturer, who in turn files it with the national entity tracking ENERGY STAR home sales on behalf of the EPA and DOE. When retailers sell ENERGY STAR homes, they supply the buyer with a form to fill out and mail to the SCEO.



The SCEO reviews the form, ensures that the home buyers have received their ENERGY STAR certification from the retailer, and signs and returns the approval form to the home buyer. The home buyers then attach the certification to their tax form if filing a paper form, or retain it with other records if filing electronically.

## Results

Data from the Systems Building Performance Alliance, the entity which tracks ENERGY STAR manufactured homes for the federal government, indicates that approximately 839 ENERGY STAR homes were produced for sale or installation in South Carolina between January and November, 2014. Eleven of these homes were sold by out-of-state retailers to SC residents, while the remainder were sold to South Carolina retailers. Of these, approximately half are known to have been sold to South Carolina residents, while the remainder of these sales records do not list the residency of the purchaser. The organization estimates that another 50 to 60 may be produced in December, bringing the annual total of ENERGY STAR qualified homes to approximately 900. The Manufactured Housing Institute of South Carolina estimates that a total of approximately 2040 homes will be shipped to the state by the end of the year, meaning that ENERGY STAR homes shipped to South Carolina retailers represent approximately 44% of the market. This is an increase of almost 10 percentage points over last year.

Table 3 shows the location and expected savings for those homes for which tax credit approvals have been sought through December 1 of this year.

**Table 3: 2014 ENERGY STAR Tax Credit Request Summary (December 1, 2014)**

|               | Expected Energy Savings mmBtu/year | Expected Cost Savings (based on average residential energy costs of 12.47/kWh) | Expected Energy Savings over 55 year life of home mmBtu | Expected Cost Savings over 55 year life of home | CO2 Savings/year (380lbs CO2/mmBtu) | CO2 Savings life of home (380lbs CO2/mmBtu) |
|---------------|------------------------------------|--|---|---|-------------------------------------|---|
| Swansea       | 15.35                              | \$561.00   | 844.25  | \$30,855.21                                     | 5833                                | 320815                                      |
| Gilbert       | 12.30                              | \$449.53   | 676.50  | \$24,724.37                                     | 4674                                | 257070                                      |
| Brunson       | 15.35                              | \$560.82   | 843.98  | \$30,845.16                                     | 5831.1                              | 320711                                      |
| Prosperity    | 14.07                              | \$514.22   | 773.85  | \$28,282.26                                     | 5346.6                              | 294063                                      |
| Gaston        | 14.07                              | \$514.22   | 773.85  | \$28,282.26                                     | 5346.6                              | 294063                                      |
| Leesville     | 12.30                              | \$449.53   | 676.50  | \$24,724.37                                     | 4674                                | 257070                                      |
| North         | 12.30                              | \$449.53   | 676.50  | \$24,724.37                                     | 4674                                | 257070                                      |
| St. George    | 14.07                              | \$514.22   | 773.85  | \$28,282.26                                     | 5346.6                              | 294063                                      |
| Latta         | 14.07                              | \$514.22   | 773.85  | \$28,282.26                                     | 5346.6                              | 294063                                      |
| Swansea       | 14.07                              | \$514.22   | 773.85  | \$28,282.26                                     | 5346.6                              | 294063                                      |
| Bennettsville | 15.35                              | \$560.82   | 843.98  | \$30,845.16                                     | 5831.1                              | 320711                                      |
| Lexington     | 12.30                              | \$449.53   | 676.50  | \$24,724.37                                     | 4674                                | 257070                                      |
| Chapin        | 12.30                              | \$449.53   | 676.50  | \$24,724.37                                     | 4674                                | 257070                                      |
| Elgin         | 12.30                              | \$449.53   | 676.50  | \$24,724.37                                     | 4674                                | 257070                                      |

|              |       |          |        |             |        |        |
|--------------|-------|----------|--------|-------------|--------|--------|
| Varn         | 14.07 | \$514.22 | 773.85 | \$28,282.26 | 5346.6 | 294063 |
| Leesville    | 15.35 | \$560.82 | 843.98 | \$30,845.16 | 5831.1 | 320711 |
| Camden       | 12.30 | \$449.53 | 676.50 | \$24,724.37 | 4674   | 257070 |
| Leesville    | 14.07 | \$514.22 | 773.85 | \$28,282.26 | 5346.6 | 294063 |
| Heath        |       |          |        |             |        |        |
| Springs      | 12.30 | \$449.53 | 676.50 | \$24,724.37 | 4674   | 257070 |
| Lexington    | 12.30 | \$449.53 | 676.50 | \$24,724.37 | 4674   | 257070 |
| Lexington    | 14.07 | \$514.22 | 773.85 | \$28,282.26 | 5346.6 | 294063 |
| Saluda       | 14.07 | \$514.22 | 773.85 | \$28,282.26 | 5346.6 | 294063 |
| Ridge        |       |          |        |             |        |        |
| Spring       | 12.30 | \$449.53 | 676.50 | \$24,724.37 | 4674   | 257070 |
| Gilbert      | 12.30 | \$449.53 | 676.50 | \$24,724.37 | 4674   | 257070 |
| Lexington    | 14.07 | \$514.22 | 773.85 | \$28,282.26 | 5346.6 | 294063 |
| Enoree       | 12.30 | \$449.53 | 676.50 | \$24,724.37 | 4674   | 257070 |
| Simpsonville | 16.83 | \$615.09 | 925.65 | \$33,830.17 | 6395.4 | 351747 |
| Elloree      | 14.07 | \$514.22 | 773.85 | \$28,282.26 | 5346.6 | 294063 |
| St. Matthews | 15.35 | \$560.82 | 843.98 | \$30,845.16 | 5831.1 | 320711 |
| North        |       |          |        |             |        |        |
| Augusta      | 14.07 | \$514.22 | 773.85 | \$28,282.26 | 5346.6 | 294063 |
| Lexington    | 15.35 | \$560.82 | 843.98 | \$30,845.16 | 5831.1 | 320711 |
| Gilbert      | 14.07 | \$514.22 | 773.85 | \$28,282.26 | 5346.6 | 294063 |
| Pelion       | 14.07 | \$514.22 | 773.85 | \$28,282.26 | 5346.6 | 294063 |
| Lexington    | 15.35 | \$560.82 | 843.98 | \$30,845.16 | 5831.1 | 320711 |
| Cordova      | 12.30 | \$449.53 | 676.50 | \$24,724.37 | 4674   | 257070 |

Notes:

1. Calculations are based on the most recent U. S. Energy Information Agency data (2005) for residential energy use based on square footage of homes. The SCEO made the very conservative assumption that the ENERGY STAR home would save only 15 percent of the energy used by the average home of approximately the same square footage.
2. Cost savings are based on an average cost per kWh of electricity in September, 2014, as reported by the US Energy Information Agency.
3. The expected lifetime of new manufactured homes is conservatively estimated at 55 years, based on information supplied by the Systems Building Research Alliance, the organization which tracks ENERGY STAR manufactured homes on behalf of the federal government. Their assumption is based in part on a report entitled *Manufactured Home Life, Existing Housing Stock Through 1997*, an update of a study entitled *Manufactured Home Life* by Dr. Carol B. Meeks, May 1995, University of Georgia.
4. Calculations are based on an estimated 380 pounds of CO2 emitted per mmBtu of energy used.

## APPENDIX A

### ENERGY STAR Incentives for Manufactured Homebuyers and Dealers

#### Customer's \$750 Income Tax Credit

In order for your customers to claim the \$750 non-refundable\* tax credit on their state tax returns, the following items must be completed:

- Step 1.** Provide the customer with a copy of the ENERGY STAR Tax Credit Application Form (available on the web at either [www.energy.sc.gov](http://www.energy.sc.gov) or [www.mhisc.com](http://www.mhisc.com)).
- Step 2.** Verify that the *Site Installation Checklist* provided by the manufacturer and shipped with the home is completed and signed (the gray ENERGY STAR quality assurance label affixed inside the home should also be signed). Return a copy of the signed *Site Installation Checklist* to the manufacturer.
- Step 3.** Give the customer two copies of the bill of sale (clearly showing date of sale) and two copies of the signed *Site Installation Checklist* (must include customer's name and home address). The customer must forward one copy of each of these documents to the State Energy Office along with the ENERGY STAR Tax Credit Application Form. The address is on the application form.
- Step 4.** The State Energy Office will approve the request and return the form to the customer. The customer must retain the form along with other income tax records, and must include a copy with his/her income tax filing if filing a paper form.

\*Non-refundable tax credits cannot reduce the tax owed to less than zero.

#### Sales Tax Elimination

South Carolina law eliminates sales tax on homes meeting ENERGY STAR requirements. State law requires retailers to maintain records on each ENERGY STAR manufactured home sold. In lieu of a special form, the State Energy Office will require that retailers simply retain copies of the *Site Installation Checklist*, which must include the customer's name and home address. By law, these records must be retained for three years and must be made available for inspection upon request of the Department of Consumer Affairs or the State Energy Office.

# **Appendix B:**

## **Tax Credit Approval Form**

**Energy Efficient (ENERGY STAR) Manufactured Home Credit Application Form**

Please follow instructions carefully and submit to:

**South Carolina Energy Office  
Attn: Energy Star Manufactured Home Credit  
1200 Senate St., Room 408 Wade Hampton Building  
Columbia, SC 29201 803-737-8030**

Applicant name:

*(Note: Applicant name must match name on bill of sale)*

Applicant Social Security Number\* or Tax Identification Number (if not an individual):

Address of home for which \$750 tax credit is sought:

Applicant mailing address, if different than above:

*(Note: If neither fax nor email is included, your form will be returned via US Mail)*

Applicant email:

*(Needed only if you prefer to receive your approved application via email)*

Applicant fax:

*(Needed only if you prefer to receive your approved application via fax)*

Applicant phone:

Date of sale:

*(Note: You must attach a copy of your bill of sale and ENERGY STAR Site Installation Checklist)*

Description of home: \_\_\_Single \_\_\_Double \_\_\_Triple

Approximate square footage: \_\_\_\_\_

I certify the above information is correct, and that I am the owner of the ENERGY STAR home for which a bill of sale and Site Inspection Checklist is attached.

**\*Social Security Privacy Act :** It is mandatory that you provide your social security number on this tax form. 42 USC 405(c)(2)(C)(i) permits a state to use an individual's social security number as means of identification in administration of any tax. SC Regulation 117-201 mandates that any person required to make a return to the SC Department of Revenue shall provide identifying numbers, as prescribed, for securing proper identification. Your social security number is used for identification purposes.

\_\_\_\_\_  
(Signature) (Please print name)

-----SCEO Approval – Do not write below this line -----

\_\_\_\_\_  
(Name) (Title) (Date)